

**ABSTRACT**

A system and method for introducing medical devices within vasculature that incorporates a dual lumen introducer allowing a plurality of guidewires to be introduced without entanglement. The introducer further includes slits  
15 formed in the dual lumen introducer and a dilator or an inner member with grooves that facilitate easy removal of the introducer and dilator from vasculature. The dual lumen introducer maintains separation between guidewires. The slits in the dual lumen introducer and the dilator grooves allow removal from the guidewires by slipping the device off the guidewires  
20 without retracting them the entire guidewire length. A peel-away sheath protects the vasculature from the guidewires, prevents the dilator from slipping off the guidewires, and maintains access to an expanded vessel for the introduction of medical devices.